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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,137	07/12/2001	Andrew Robert Oakley	31229-173019	8041

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EXAMINER

PESIN, BORIS M

ART UNIT	PAPER NUMBER
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2174

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,137

Applicant(s)

OAKLEY ET AL.

Examiner

Boris Pesin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

This communication is responsive to Amendment A, filed 10/08/2004.

Claims 1-20 are pending in this application. Claims 1, 15, and 18 are independent claims. In the Amendment A, claims 1-19 were amended and claim 20 was added as new. This action is made Final.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 12 recite the limitation "display means". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 7, 10, 15, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Elrod et al. (US 5495269).

In regards to claim 1, Elrod teaches an interactive display system comprising a display device (Figure 1, Element 18), computing means (Figure 1, Element 16) and at least one remote signaling device (Figure 1, Element 20), in which the computing means is arranged to supply image information to the display device (Figure 1, Elements 16 and 12); in which the at least one remote signaling device is operable to transmit signals to a receiver portion of the display device (i.e. "The light beam from each pen is received by receiving subsystem 14 which conveys information concerning the location of each pen to computer 16" (Column 3, Line 48), the display device being arranged to supply the signals to the computing means (i.e. "The light beam from each pen is received by receiving subsystem 14 which conveys information concerning the location of each pen to computer 16" (Column 3, Line 48), said signals being stored by the computing means for display, and in which the display device is a communications hub of the display system arranged to receive control signals from a pointing device and/or a remote control device and arranged to transmit those signals to the computing means in order to control an image on the display device (Figure 1, Element 12 and 14).

In regards to claim 2, Elrod teaches an interactive display system in which the display device uses a single communications link between it and the computing means (Figure 1, Element 14), which link is arranged to convey signals both from the pointing

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device and the at least one remote signaling device, to enable a most efficient transfer of data.

In regards to claim 4, Elrod teaches an interactive display system, in which the at least one remote signaling device is a remote control device which is operable to transmit control signals to a receiver portion of the display device, which control signals are supplied to the computing means and are operable to control the computing means and thus image information supplied to the display device. (i.e. "The present invention provides one or more input devices for simultaneously and independently entering information into a large area electronic writing system comprising a large area viewing surface upon which is displayed information generated by the electronic system. The output illumination of each input device uniquely identifies the source and the function to be performed and is projected as a light spot upon the display surface. Projected illumination from all of the input devices falls upon a receiving subsystem which generates output signals representative of the total optical input of the light spots." Column 2, Line 35).

In regards to claim 5, Elrod teaches an interactive display system, in which the display device includes position indication means for indicating the position of a pointing device relative to a surface of the display device. (i.e. "The light beam from each pen is received by receiving subsystem 14 which conveys information concerning the location of each pen to computer 16" (Column 3, Line 48).

In regards to claim 7, Elrod teaches an interactive display system as claimed in claim 1, in which the pointing device is operable to induce image control signals in the

position indication means, which image control signals are operable to control the computing means and thus image information is displayed on the display device. (i.e. "The present invention provides one or more input devices for simultaneously and independently entering information into a large area electronic writing system comprising a large area viewing surface upon which is displayed information generated by the electronic system. The output illumination of each input device uniquely identifies the source and the function to be performed and is projected as a light spot upon the display surface. Projected illumination from all of the input devices falls upon a receiving subsystem which generates output signals representative of the total optical input of the light spots." Column 2, Line 35).

In regards to claim 10, Elrod teaches an interactive display system, in which the display device includes an output portion arranged to transmit signals from both the receiver portion and the position indication means to the computing means (i.e. "The light beam from each pen is received by receiving subsystem 14 which conveys information concerning the location of each pen to computer 16" (Column 3, Line 48).

In regards to claim 15, Elrod teaches a method of operating an interactive display system comprises projecting an image of a computer display of a computer onto a display device (Figure 1, Element 12), receiving signals at a receiver portion of the display device, which signals are transmitted from at least one remote signaling device (i.e. "The light beam from each pen is received by receiving subsystem 14 which conveys information concerning the location of each pen to computer 16" (Column 3, Line 48), and transmitting those signals to the computer, to thereby manipulate the

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image projected onto the display device (Figure 1, Element 16), in which the display device is a communications hub of the display system arranged to receive control signals from a pointing device and/or a remote control device and arranged to transmit those signals to the computing means in order to control an image on the display device (i.e. "The light beam from each pen is received by receiving subsystem 14 which conveys information concerning the location of each pen to computer 16" (Column 3, Line 48).

In regards to claim 17, Elrod teaches a method, in which the signals from at least one remote signaling device are transmitted in response to information displayed on the display device (i.e. "The light beam from each pen is received by receiving subsystem 14 which conveys information concerning the location of each pen to computer 16" (Column 3, Line 48).

In regards to claim 18, Elrod teaches an interactive display device comprising a receiver portion for receiving signals from a remote signaling device (Figure 1, Element 14), the display device being operable to supply the received signals to a computing means (Figure 1, Elements 14 and 16) and being suitable for displaying an image from a computing means received by said display device (Figure 1, Elements 16 and 12), in which said interactive display device forms a communication hub for an interactive display system (Element 1, Figures 18, 12 and 14).

In regards to claim 19, Elrod teaches a remote signaling device for use with the interactive display system (Figure 1, Element 20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating

obviousness or nonobviousness.

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269) in view of Wood et al. (US 6414673).

In regards to claim 3, Elrod teaches all the limitations of claim 2. He does not teach an interactive display system in which the single link is a wireless connection. Wood teaches, "A wireless connection is provided between the receivers 18a, 18b and the signal processor 57, wherein information data signals 160a, 160b are transmitted from the receiver locations 18a, 18b to the signal processor 57." Column 12, Line 18). It would have been obvious to one of ordinary skill in the art at the time of the invention to

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modify Elrod with the teachings of Wood and include a wireless connection with the motivation to provide for a clutter free wireless environment.

In regards to claim 6, Elrod teaches all the limitations of claim 1. He does not teach an interactive display system which is operable to calibrate the location of an image on the display device relative to the display device. Wood teaches, "an alternate embodiment of the transmitter pen location system 10d, in which the receiver locations 18a, 18b are movable, wherein a calibration transmitter 92 is added at one receiver location 18b, providing automatic self-calibration for the system" (Column 12, Line 9). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod with the teachings of Wood and include a calibration system with the motivation to provide for more accurate display of information.

Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269) in view of Geaghan et al. (US 5790114).

In regards to claim 8, Elrod teaches all the limitations of claim 1. He does not teach an interactive display system, in which the pointing device is arranged to take precedence over the at least one remote signaling device. Geaghan teaches, "Pen or Finger mode detects pen and finger contact, giving priority to pen contact when both are detected." Column 7, Line 15). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod with the teachings of Geaghan and include a method of giving priority to the pointing device over another device with the motivation to provide for easy control of who gets to write on the whiteboard at a given time.

In regards to claim 12, Elrod teaches all the limitations of claim 1. He does not teach an interactive display system, in which where a plurality of remote signaling devices are provided, the display means requests information from each remote signaling device in turn, by polling. Geaghan teaches, "the driver employs polling rather than interrupts to determining if data is available at the serial port" Column 14, Line 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod with the teachings of Geaghan and include a method for polling devices in order to obtain data in a desired manner with the motivation to provide for an orderly and easy method of obtaining data.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269) in view of Krumholz (US 4538993).

In regards to claim 9, Elrod teaches all the limitations of claim 1. He does not teach an interactive display system in which the pointing device is operable to selectively enable the at least one remote signaling device. Krumholz teaches that, "interrupt row enable the teacher to cut off reception of particular student computer outputs" Column 4, Line 11). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod with the teachings of Krumholz and include a method to enable remote signaling devices with the motivation to have easy control of who gets to send out information.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269) in view of Hassan et al. (US 5689562).

In regards to claim 11, Elrod teaches all the limitations of claim 1. He does not teach an interactive display system, in which the at least one remote signaling device is operable to transmit signals to the receiver portion only in response to a request signal from the display means. Hassan teaches, "The image control unit 10 starts the image transmission process by sending an image data request to the image transmission unit 20." (Column 8, Line 14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod with the teachings of Hassan and system that transmits signals to the receiver portion only in response to a request with the motivation to provide for better control of signals passed around the system.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269).

In regards to claim 13, Elrod teaches all the limitations of claim 1. He does not specifically teach an interactive display system, in which the at least one remote control device is operable to control the computing means in substantially the same manner as a keyboard and mouse combination. Official notice is given that it is well known in the art to use a remote control device as a keyboard or a mouse. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod and include a system to use the remote as a keyboard and/or mouse with the motivation to enable the user to effortlessly perform numerous different tasks on the device.

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Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269) in view of Lin et al. (US 5528235).

In regards to claim 14, Elrod teaches all the limitations of claim 1. He does not teach an interactive display system in which the system comprises one master control device which is a remote control device or a pointing device, and a plurality of subsidiary remote signaling devices. Lin teaches, "the present invention can be used as a control keypad for a variety of household appliances such as master remote control device for integrated audio-video entertainment, microwave oven, security alarm panel and the like" Column 8, Line 27). It is inherent in Lin's invention that numerous other remote signaling devices are present but only one that controls all of the devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod with the teachings of Lin and include a master remote control with the motivation to provide for more control over the devices.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269) in view of Junod et al. (US 5854621).

In regards to claim 16, Elrod teaches all the limitations of claim 15. He does not teach a method wherein the signals from the at least one remote signaling device are independent of the location of the remote signaling device relative to the display device. Junod teaches, a wireless radio frequency ("RF") communications interface between peripherals and the host personal computer or workstation. In one embodiment, the present invention provides a wireless electronic mouse which uses an RF transmitter to

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transmit information unidirectionally to a receiver which is coupled to a host computer.” (Abstract, Line 1). It is well known in the art that RF devices, such as taught by Junod, transmit their signals independently of their location relative to the display. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod with the teachings of Junod and include a device such as a RF wireless mouse, with the motivation to provide the user more flexibility in moving around the room and still being able to control what is on the screen.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod et al. (US 5495269) in view of Wood et al. (US 6414673) in further view of Junod et al. (US 5854621).

In regards to claim 20, Elrod and Wood teach all the limitations of claim 3. Elrod and Wood do not specifically teach a display system wherein the wireless connection is one of infra red means or radio means. Junod teaches, a wireless radio frequency ("RF") communications interface between peripherals and the host personal computer or workstation. In one embodiment, the present invention provides a wireless electronic mouse which uses an RF transmitter to transmit information unidirectionally to a receiver which is coupled to a host computer.” (Abstract, Line 1). It is well known in the art that RF devices, such as taught by Junod, transmit their signals independently of their location relative to the display. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Elrod and Wood with the teachings of Junod and include a device such as a RF wireless mouse, with the motivation to provide

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the user more flexibility in moving around the room and still being able to control what is on the screen.

Response to Arguments

Applicant's arguments filed 10/08/2004 have been fully considered but they are not persuasive.

Applicant argues:

(a). Elements 12 and 14 of Elrod are not part of the display device; therefore, Elrod cannot anticipate claims 1, 15, and 18 and any of their depending claims.

In regards to argument (a), The Examiner argues that a display device consists of more than just a display screen. The display device consists of all of the parts that are needed in order to display an image. As evidence, the Examiner presents a definition of "display screen" and a "display device".

display screen – "A surface area upon which text and graphics are temporarily made to appear for human viewing. It is typically a CRT or flat panel technology."

display device – "is a device for visual presentation of images (including text) acquired, stored, or transmitted in various forms. Some of them are called simply displays."

"The most common types of display devices are:

Electronic displays

CRT display (earliest)

LED displays (later)
Seven segment display
Fourteen segment display
Sixteen segment display
LCD (most recent)
HPA display
TFT display
OLED (forthcoming)
Projectors
Analog projectors
Movie projector
Slide projector
Digital projectors
Digital projector"

There is a clear distinction between a display screen and a display device. Elrod teaches sub systems of a display device and all the subparts when taken as a whole make up a display device.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris Pesin whose telephone number is (571) 272-4070. The examiner can normally be reached on Monday-Friday except every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BP

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